

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1, 3, and 5-10 are pending in the present application. Claims 1 and 3 are amended and Claims 2 and 4 are canceled without prejudice or disclaimer by the present amendment.

Claim amendments find support in the specification and claims as originally filed. Thus, no new matter is added.

In the outstanding Office Action, Claim 3 was rejected under 35 U.S.C. § 112, second paragraph; Claim 2 was rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent Publication No. 2002/0191567 to Famolari et al. (herein “Famolari”); Claims 1 and 3 were rejected under 35 U.S.C. § 103(a) as unpatentable over Famolari in view of U.S. Patent Publication No. 2003/0022683 to Beckmann et al. (herein “Beckmann”); Claims 4 and 5 were rejected under 35 U.S.C. § 103(a) as unpatentable over Famolari in view of Beckmann and U.S. Patent No. 6,122,483 to Lo et al. (herein “Lo”); Claim 6 was rejected under 35 U.S.C. § 103(a) as unpatentable over Famolari in view of U.S. Patent No. 6,707,900 to Jellema et al. (herein “Jellema”); Claims 7 and 8 were rejected under 35 U.S.C. § 103(a) as unpatentable over Jellema in view of Famolari; and Claims 9 and 10 were rejected under 35 U.S.C. § 103(a) as unpatentable over Jellema in view of Beckmann.

Regarding the rejection under 35 U.S.C. § 112, second paragraph, Claim 3 is amended to clearly show antecedent basis for the radio network controller feature identified in the outstanding Office Action. Accordingly, it is respectfully requested that rejection be withdrawn.

Claim 2 is canceled without prejudice or disclaimer, thereby rendering moot the rejection of Claim 2 under 35 U.S.C. § 102(e) as anticipated by Famolari.

In addition, Applicants respectfully traverse the rejections of Claims 1, 3, 4, and 5 under 35 U.S.C. §103(a) as unpatentable over Famolari, Beckmann, and Lo.

Claim 3 is directed to a base station supporting multicast communication that includes, in part, a response signal transmitter configured to transmit at least one base station response signal to a radio network controller. The at least one response signal responding to a control signal for a multicast group and being selected from at least one response signal transmitted from mobile stations joining in the same multicast group. In addition, the base station includes a response signal holder configured to hold the at least one response signal for a predetermined duration before transmitting the at least one response signal to the radio network controller. Independent Claim 1 includes similar features.

For example, by holding the response signal at the base station and not at the mobile station, a base station embodiment according to Claims 1 or 3 may advantageously hold the response signal for a predetermined duration after the first reception of the response signal.

Applicants respectfully submit that Famolari and Beckmann fail to teach or suggest each of the features of Claims 1 and 3. For example, Famolari and Beckmann fail to teach or suggest a base station that holds at least one response signal for a predetermined duration before transmitting it to the radio network controller. Famolari merely indicates that “when an edge router receives information addressed to one of the mobile terminal’s unicast IP addresses, the edge router replaces the unicast IP address with the mobile terminal’s multicast IP address and broadcasts the information as a multicast message.”<sup>1</sup> Thus, Famolari indicates that multicast messages are routed in a conventional fashion, and Famolari fails to teach or suggest any holding of a response signal for a predetermined duration. Likewise, Beckmann is silent regarding those features.

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<sup>1</sup> Famolari at paragraph [0055].

Further, Applicants respectfully traverse the assertion in the Office Action that Lo teaches a response signal holder configured to hold the response signal for a predetermined duration.<sup>2</sup> Lo describes a satellite communication system that provides multicast messages to a mobile station. In particular, Lo indicates that the mobile station detects a paging signal (e.g., a control signal) transmitted from a network control center by a base station, in order to receive a multicast message.<sup>3</sup> Further, according to Lo, a subscriber unit (e.g., mobile station) waits “a random amount of time before generating an acknowledge signal . . . to a paging signal [e.g., a control signal] for a multicast message,”<sup>4</sup> and “[b]y delaying the transmission of the acknowledge signal for a random amount of time for multicast message requiring acknowledgement, control and traffic channel congestion is reduced.”<sup>5</sup>

However, Applicants respectfully submit that Lo fails to teach or suggest that a response signal holder of a base station is configured to hold a response signal, and Lo also fails to teach or suggest holding at least one response signal received from a mobile station, as required by Claims 1 and 3. For example, according to the claimed invention, by holding the response signal at the base station and not at the mobile station, the claimed base station may advantageously hold the response signal for a predetermined duration after the first reception of the response signal. On the other hand, Lo fails to teach or suggest holding response signals at the base station or holding response signals received from mobile station, and therefore Lo also fails to achieve the advantages of the claimed invention. Accordingly, Applicants respectfully submit that Famolari, Beckmann, and Lo, whether taken individually or in combination, fail to teach or suggest “a response signal holder configured to hold the at least one response signal for a predetermined duration before transmitting the at least one response signal to the radio network controller,” as recited in independent Claims 1 and 3.

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<sup>2</sup> Office Action at page 5, lines 8-10.

<sup>3</sup> Lo at column 8, line 14 to column 9, line 15.

<sup>4</sup> Lo at column 2, lines 21-26.

<sup>5</sup> Lo at column 2, lines 30-34.

Accordingly, Applicants respectfully submit that independent Claims 1 and 3, and claims depending therefrom, patentably define over Famolari, Beckmann, and Lo.

Thus, Applicants respectfully request the rejection of Claims 1 and 3 under 35 U.S.C. § 103(a) as unpatentable over Famolari and Beckmann, and the rejection of Claims 4 and 5 under 35 U.S.C. § 103(a) as unpatentable over Famolari, Beckmann, and Lo, be withdrawn.

Moreover, Applicants respectfully traverse the rejections of Claims 6-8 as unpatentable over Jellema and Famolari.

Claim 7 is directed to a base station supporting multicast communication, the base station including, in part, a response signal counter configured to count a number of response signals to a control signal for a multicast group. The base station also includes a response signal transmitter configured to transmit at least one response signal to a radio network controller when the counted number of response signals is more than a predetermined number. Independent Claim 6 includes similar features.

Applicants respectfully submit that Jellema and Famolari fail to teach or suggest each feature of independent Claims 6 and 7. For example, Jellema and Famolari fail to teach or suggest a base station that sends a message to a radio network controller under a condition that a number of messages sent from mobile stations to the base station is greater than a predetermined number.

Jellema describes a method of dynamic load limiting in which a service switching point (SSP) 4, 6, 8, 10 dynamically alters a counter value based on a number of call attempts received at the SSP. Jellema indicates that when the number of call attempts is less than the counter value, the SSP forwards call attempts to a Service Control Point (SCP) 2.<sup>6</sup> Further, according to Jellema, when a number of call attempts exceeds the counter value, subsequent

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<sup>6</sup> Jellema at column 2, lines 20-23.

call attempts are rejected by the SSP and the calls are not forwarded to the SCP.<sup>7</sup> Thus, according to Jellema, a SSP (e.g., base station) rejects received call attempts and does not forward the received call attempts to an SCP (e.g., radio network controller) when a number of call attempts *exceeds* a counter value (e.g., predetermined number). Instead, according to Jellema, the SSP (e.g., base station) only forwards the call attempts to the SCP (e.g., radio network controller) when the number of call attempts is *less than* the counter value (e.g., predetermined number). Therefore, Jellema describes a very different system than the inventions of Claims 6 and 7 in which a response signal transmitter is configured to transmit a base station response when a counted number of responses is *more than* a predetermined number.

Further, Applicants respectfully submit that Jellema also fails to teach or suggest the claimed “response signal.” As discussed above, Jellema merely describes an action taken by an SSP based on a number of attempts to make a call (i.e., call attempts). However, the attempts to make a call described by Jellema are fundamentally different than the claimed mobile station response signals, which may be sent in response to a control signal for a multicast group. Thus, Applicants also respectfully submit that Jellema completely fails to teach or suggest the claimed response signal.

In addition, Applicants respectfully submit that Famolari also fails to teach or suggest the claimed features lacking in the disclosure of Jellema.

Accordingly, Applicants respectfully submit that independent Claims 6 and 7 and claims depending therefrom patentably define over Jellema and Famolari.

Thus, it is respectfully requested that the rejections of Claims 6-8 under 35 U.S.C. § 103(a) as unpatentable over Jellema and Famolari also be withdrawn.

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<sup>7</sup> Jellema at column 2, lines 36-40, and FIG. 2 at steps 22-32.

Further, Applicants respectfully traverse the rejection of Claims 9 and 10 under 35 U.S.C. § 103(a) as unpatentable over Jellema and Beckmann.

Claim 9 is directed to a radio network controller that includes, in part, a receiver configured to receive response signals from base stations, and an extractor configured to extract information showing that the number of received response signals is more than a predetermined number from the received response signals.

Applicants respectfully submit that Jellema and Beckman also fail to teach or suggest each feature of independent Claim 9. As discussed above, according to Jellema, a SSP (e.g., base station) rejects received call attempts and does not forward the received call attempts to an SCP (e.g., radio network controller) when a number of call attempts exceeds a counter value (e.g., predetermined number). Instead, according to Jellema, the SSP (e.g., base station) only forwards the call attempts to the SCP (e.g., radio network controller) when the number of call attempts is less than the counter value (e.g., predetermined number).

Thus, according to Jellema, when a predetermined number of call attempts is more than a predetermined number, the SSP does not send anything, which is very different than the invention of Claim 9 in which an extractor is configured to extract information showing that a number of received response signals is more than a predetermined number.

In addition, Applicants respectfully submit that Beckmann also fails to teach or suggest the claimed features lacking in the disclosure of Jellema.

Accordingly, Applicants respectfully submit that Claim 9 patentably defines over Jellema and Beckmann.

Claim 10 is directed to a radio network controller that includes, in part, a receiver configured to receive response signals from base stations, an extractor configured to extract a number of received response signals, and a radio controller configured to perform radio controlling based on the extracted number of response signals.

As discussed above, according to Jellema, when a predetermined number of call attempts is more than a predetermined number, the SSP does not send anything to the SCP, which is very different than the invention of Claim 10 in which response signals are received from base stations, a number of received response signals is extracted from the received response signals, and radio controlling is performed based on the extracted number of response signals. In addition, Beckmann also fails to teach or suggest the claimed features lacking in the disclosure of Jellema.

Accordingly, Applicants respectfully submit that Claim 10 also patentably defines over Jellema and Beckmann.

Accordingly, Applicants respectfully submit that independent Claims 1-3, 6, 7, 9, and 10, and claims depending therefrom, are allowable.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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